

B. Amendment to the Claims

Please cancel claims 1-5 without prejudice or disclaimer.

1-5. (Cancelled)

6. (Previously Presented) A metallic rotary polygonal mirror comprising:

a metallic polygonal mirror substrate made of aluminum or an aluminum alloy;

an intermediate layer of  $\text{TiO}_2$  formed by vacuum deposition on the substrate;

a metallic reflective layer of Cu formed by vacuum deposition on the intermediate layer; and

a protective layer including at least a layer of  $\text{Al}_2\text{O}_3$ , formed by vacuum deposition on the metallic reflective layer.

7. (Previously Presented) The metallic rotary polygonal mirror according to claim 6, wherein said intermediate layer has a layer thickness of from 50 nm to 150 nm, and said metallic reflective layer has a layer thickness of from 80 nm to 150 nm.

8. (Previously Presented) The metallic rotary polygonal mirror according to claim 6, wherein said protective layer comprises a double layer consisting of a first protective layer and a second protective layer.

9. (Previously Presented) The metallic rotary polygonal mirror according to claim 8, wherein said first protective layer is a layer of  $\text{Al}_2\text{O}_3$ , and said second protective layer is a layer of  $\text{SiO}_2$ .

10. (Previously Presented) The metallic rotary polygonal mirror according to claim 9, wherein said first protective layer has a layer thickness of from 150 nm to 200 nm, and said second protective layer has a layer thickness of from 10 nm to 20 nm.

11. (Withdrawn) The metallic rotary polygonal mirror according to claim 6, wherein said protective layer comprises a triple layer consisting of a first protective layer, a second protective layer and a third protective layer.

12. (Withdrawn) The metallic rotary polygonal mirror according to claim 11, wherein said first protective layer is a layer of  $\text{Al}_2\text{O}_3$ , said second protective layer is a layer of  $\text{TiO}_2$ , and said third protective layer is a layer of  $\text{SiO}_2$ .

13. (Withdrawn) The metallic rotary polygonal mirror according to claim 12, wherein said first protective layer has a layer thickness of from 150 nm to 200 nm, said second protective layer has a layer thickness of from 80 nm to 100 nm, and said third protective layer has a layer thickness of from 10 nm to 20 nm.

14. (Original) The metallic rotary polygonal mirror according to claim 6, which has a surface reflectance of 95% or higher.

15. (Withdrawn) A process for producing a metallic rotary polygonal mirror, comprising the steps of:

forming an intermediate layer of  $\text{TiO}_2$  by vacuum deposition on a metallic polygonal mirror substrate metal comprised of aluminum or an aluminum alloy;

forming a high-reflectance metallic reflective layer of Cu by vacuum deposition on the intermediate layer; and

forming a protective layer including at least a layer of  $\text{Al}_2\text{O}_3$  by vacuum deposition on the metallic reflective layer.

16. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein during the formation of said intermediate layer of  $\text{TiO}_2$ ,  $\text{O}_2$  gas is added under a pressure of from  $6.65 \times 10^{-3}$  Pa to  $26.6 \times 10^{-3}$  Pa.

17. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein during the formation of said high-reflectance

metallic reflective layer of Cu, the metallic reflective layer is formed after the inside of a vacuum deposition chamber reaches a degree of vacuum of  $2.66 \times 10^{-3}$  Pa or above subsequently to the formation of said intermediate layer of  $TiO_2$  film.

18. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein in the formation of said protective layer including at least a layer of  $Al_2O_3$ , when the layer of  $Al_2O_3$  is formed on said high-reflectance metallic thin film of Cu, the protective layer is formed without addition of any  $O_2$  gas at the initial stage of film formation until the film comes to have a layer thickness of 15 to 30% of a stated layer thickness, and further thereon, after the film has been formed beyond 15 to 30% and until it comes to have the stated layer thickness, with addition of  $O_2$  gas under a pressure of from  $6.65 \times 10^{-3}$  Pa to  $26.6 \times 10^{-3}$  Pa.

19. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said intermediate layer is formed in a layer thickness of from 50 nm to 150 nm, and said metallic reflective layer is formed in a layer thickness of from 80 nm to 150 nm.

20. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said protective layer is formed in a double layer consisting of a first protective layer and a second protective layer.

21. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 20, wherein said first protective layer is a layer of  $\text{Al}_2\text{O}_3$ , and said second protective layer is a layer of  $\text{SiO}_2$ .

22. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 21, wherein said first protective layer is formed in a layer thickness of from 150 nm to 200 nm, and said second protective layer is formed in a layer thickness of from 10 nm to 20 nm.

23. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said protective layer is formed in a triple layer consisting of a first protective layer, a second protective layer and a third protective layer.

24. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 23, wherein said first protective layer is a layer of  $\text{Al}_2\text{O}_3$ , said second protective layer is a layer of  $\text{TiO}_2$ , and said third protective layer is a layer of  $\text{SiO}_2$ .

25. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 24, wherein said first protective layer is formed in a layer thickness of from 150 nm to 200 nm, said second protective layer is formed in a layer thickness of from 80 nm to 100 nm, and said third protective layer is formed in a layer thickness of from 10 nm to 20 nm.

26. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said metallic rotary polygonal mirror has a surface reflectance of 95% or higher.